

IN THE CLAIMS

Claims pending:

- At time of the Action: 1-8, 10-18, 20-22, 24, 26-30, 32-34, 36, and 39-43
- After this Response: 1-8, 10-18, 20-22, 24, 26-30, 32-34, 36, and 39-43

Currently Amended claims: 1, 13, 22, 27, 36, and 39

Canceled or Withdrawn claims: None

10 This listing of claims replaces all prior versions and listings:

1. (Currently Amended) A method, implemented in a device, the method comprising:

15 obtaining a task sequence at the device that describes a set of one or more steps to be carried out in managing multiple additional devices;

generating a job tree at the device representing the set of one or more steps, the set of one or more steps configured to perform a method comprising at least one of:

20 configuring firmware of the multiple additional devices;
determining a hardware configuration of each of the multiple additional devices;

downloading a deployment agent to each of the multiple additional devices, the deployment agent comprising a temporary operating system that is designed for the particular hardware configuration of each of the multiple additional devices and includes sufficient functionality to enable an operating system to be installed on each of the multiple additional devices;

25 downloading an operating system to the multiple additional devices;
30 and

rebooting the multiple additional devices into the operating system;
and or

~~configuring the operating system of the multiple additional devices;
and~~

5 sending one or more commands configured to carry out the set of one or
more steps in accordance with the job tree, wherein the one or more commands are
configured to carry out at least one of the one or more steps asynchronously for
the multiple additional devices, and are configured to carry out at least one of the
one or more steps concurrently for the multiple additional devices.

10 2. (Previously Presented) The method as recited in claim 1, wherein the
set of one or more steps includes steps for automatically deploying an operating
system on the multiple additional devices.

15 3. (Previously Presented) The method as recited in claim 1, wherein
carrying out the set of one or more steps comprises:

carrying out a first step of the set of one or more steps; and
carrying out the remaining steps of the set of one or more steps only if the
first step is completed successfully.

20 4. (Presently Presented) The method as recited in claim 1, wherein
carrying out the set of one or more steps causes the device to have firmware on the
multiple additional devices configured and an operating system to be deployed on
the multiple additional devices.

25 5. (Previously Presented) The method as recited in claim 1, wherein the
task sequence is part of an Extensible Markup Language (XML) file.

6. (Previously Presented) The method as recited in claim 1, wherein one of the steps comprises another task sequence.

7. (Previously Presented) The method as recited in claim 1, wherein 5 one of the steps comprises an operation to be performed.

8. (Previously Presented) The method as recited in claim 1, wherein the job tree comprises a parent node corresponding to the job and one or more child nodes, wherein each child node corresponds to one of the one or more steps.

10

9. (Canceled)

10. (Previously Presented) The method as recited in claim 1, wherein the task sequence comprises a user-defined task sequence.

15

11. (Previously Presented) The method as recited in claim 1, wherein the task sequence comprises a user-selected task sequence.

12. (Previously Presented) The method as recited in claim 1, further 20 comprising recording the set of one or more steps in a log.

13. (Currently Amended) One or more computer readable storage media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to:

receive a user-defined task sequence;

5 convert the user-defined task sequence into an ordered series of steps, the ordered series of steps configured to perform a method comprising at least one of:

configuring firmware on multiple devices;

determining a hardware configuration of multiple devices;

downloading a deployment agent to each of the multiple devices, the

10 deployment agent comprising a temporary operating system that is
designed for the particular hardware configuration of each of the multiple
devices and includes functionality to enable an operating system to be
installed on each of the multiple devices;

downloading an operating system to the multiple devices; and

15 rebooting the multiple devices into the operating system; and or
configuring the operating system of the multiple devices; and

send one or more commands configured to perform the series of steps in managing the multiple devices over a network in accordance with their order, wherein the one or more commands are configured to perform at least one of the 20 series of steps asynchronously for the multiple devices and are configured to perform at least one of the series of steps concurrently for the multiple devices.

14. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the user-defined task sequence is received in 25 an Extensible Markup Language (XML) format.

15. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the steps includes steps for automatically deploying an operating system on the multiple devices.

5 16. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the instructions that cause the one or more processors to perform the series of steps comprise instructions that cause the one or more processors to:

carry out a first step of the series of steps; and

10 carry out the remaining steps of the series of steps only if the first step is completed successfully.

15 17. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the task sequence includes another task sequence.

18. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the task sequence includes one or more operations to be performed.

20

19. (Canceled)

20. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the instructions that cause the one or more processors to convert the user-defined task sequence into an ordered series of steps comprises instructions that cause the one or more processors to convert the user-defined task sequence into a tree having a plurality of nodes, wherein each of the steps is represented by one of the plurality of nodes.

21. (Previously Presented) The one or more computer readable storage media as recited in claim 13, wherein the plurality of instructions further causes the one or more processors to log the series of steps as having been performed on the multiple devices.

5

22. (Currently Amended) A method, implemented in a device, the method comprising:

obtaining a user-defined task sequence at the device that describes actions to be carried out to automatically deploy an operating system to multiple 10 additional devices;

converting, at the device, the user-defined task sequence to a set of one or more steps of a job to be carried out to automatically deploy the operating system to the multiple additional devices, the set of one or more steps comprising:

~~configuring firmware of the multiple additional devices;~~

15 ~~determining a hardware configuration of each of the multiple additional devices;~~

~~downloading a deployment agent to each of the multiple additional devices, the deployment agent comprising a temporary operating system that is designed for the particular hardware configuration of each of the multiple additional devices and includes one or more drivers that are configured to control hardware components on the multiple additional devices that can be used to deploy an operating system on each of the multiple additional devices;~~

20 25 ~~downloading an operating system to the multiple additional devices by copying an operating system image file to the multiple additional devices; and~~

~~rebooting the multiple additional devices into the operating system; and~~

~~configuring the operating system of the multiple additional devices; and~~

sending one or more commands configured to carry out the one or more steps of the job, wherein the one or more commands are configured to carry out at least one of the one or more steps asynchronously for the multiple additional devices, and are configured to copy the operating system image file to the multiple additional devices concurrently.

23. (Canceled)

10

24. (Previously Presented) The method as recited in claim 22, wherein carrying out the set of one or more steps comprises:

carrying out a first step of the set of one or more steps; and

carrying out the remaining steps of the set of one or more steps only if the 15 first step is completed successfully.

25. (Canceled)

26. (Previously Presented) The method as recited in claim 22, wherein 20 the converting comprises converting the user-defined task sequence to a tree having a plurality of nodes, wherein each of the one or more steps is represented by one of the plurality of nodes.

27. (Currently Amended) One or more computer readable storage media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to:

obtain a user-selected task sequence;

5 convert the user-selected task sequence into an ordered series of steps, the ordered series of steps configured to automatically deploy an operating system to multiple devices, the ordered series of steps comprising:

~~configuring firmware of multiple devices;~~

~~determining a hardware configuration of multiple devices;~~

10 ~~downloading a deployment agent to each of the multiple devices, the deployment agent comprising a temporary operating system that is designed for the particular hardware configuration of each of the multiple devices and includes one or more drivers that are configured to control hardware components on the multiple devices that can be used to deploy an operating system on each of the multiple devices;~~

downloading an operating system to the multiple devices; and

rebooting the multiple devices into the operating system; and

~~configuring the operating system of the multiple devices; and~~

send one or more commands configured to perform the series of steps to 20 automatically deploy the operating system to the multiple devices over a network in accordance with their order, wherein the one or more commands are configured to perform at least one of the series of steps asynchronously for the multiple devices and are configured to perform the step of downloading the operating system to the multiple devices in parallel.

25
28. (Previously Presented) The one or more computer readable storage media as recited in claim 27, wherein the user-selected task sequence is a user-defined task sequence.

29. (Previously Presented) The one or more computer readable storage media as recited in claim 27, wherein the ordered series of steps comprises a tree having a plurality of nodes, wherein each of the one or more elements for each step is represented by one of the plurality of nodes.

5

30. (Previously Presented) The one or more computer readable storage media as recited in claim 29, wherein the ordered series of steps includes a one to one corresponding of elements to steps.

10

31. (Canceled)

15

32. (Previously Presented) The one or more computer readable storage media as recited in claim 27, wherein the instructions that cause the one or more processors to perform the ordered series of steps comprise instructions that cause the one or more processors to:

carry out a first step of the ordered series of steps; and

carry out the remaining steps of the ordered series of steps only if the first step is completed successfully.

20

33. (Previously Presented) The one or more computer readable storage media as recited in claim 27, wherein the task sequence includes another task sequence.

25

34. (Previously Presented) The one or more computer readable storage media as recited in claim 27, wherein the task sequence includes one or more operations to be performed.

35. (Canceled)

36. (Currently Amended) A system comprising:

a processor; and

a memory embodying instructions configured to:

obtain a task sequence that describes a set of one or more steps to be carried out to automatically deploy an operating system to multiple devices;

5 generate a job representation of the set of one or more steps, the set of one or more steps comprising:

~~configuring firmware of the multiple devices;~~

downloading an operating system to the multiple devices by

10 copying an operating system image file to the multiple additional devices;

rebooting the multiple devices; and

configuring the operating system of the multiple devices; and

15 send one or more commands configured to carry out the set of one or more steps in accordance with the job representation, wherein the one or more commands are configured to carry out the steps of ~~configuring firmware~~, rebooting[[],] and configuring the operating system asynchronously for the multiple devices, and are configured to copy the operating system image file to the multiple devices concurrently.

20

37. (Canceled)

38. (Canceled)

39. (Currently Amended) A system comprising:

a controller, stored on one or more computer-readable storage media and configured to be implemented at least in part by at least one of one or more processors to obtain a task sequence that describes one or more steps to be performed on multiple remote devices, and to generate a job representation of the one or more steps, the one or more steps configured to perform at least one of:

~~configuring firmware of the multiple remote devices;~~

downloading an operating system to the multiple remote devices;

rebooting the multiple remote devices; ~~and~~ [[or]]

10 configuring the operating system of the multiple remote devices; and

a network boot service, configured to be implemented at least in part by at least one of the one or more processors to detect when the multiple remote devices are coupled to a network that the system is also coupled to, and to communicate with the controller to determine which of the steps of the job representation are to be carried out in response to the detection, wherein at least one of the one or more steps are configured to be carried out asynchronously for the multiple remote devices, and at least one of the one or more steps are configured to be carried out concurrently for the multiple remote devices.

20 40. (Previously Presented) The system as recited in claim 39, wherein the one or more steps includes steps for automatically deploying an operating system on the multiple remote devices.

25 41. (Previously Presented) The system as recited in claim 39, wherein one of the steps comprises another task sequence.

42. (Previously Presented) The system as recited in claim 39, wherein one of the steps comprises an operation to be performed on the multiple remote devices.

5 43. (Previously Presented) The system as recited in claim 39, wherein the job representation comprises a tree having a plurality of nodes, and wherein each of the one or more steps is represented by one of the plurality of nodes.